REMARKS

Claim 12 has been rewritten in independent form and has been amended to overcome the rejection under 35 U.S.C. §101, and is otherwise essentially unchanged from the originally submitted claim 12.

Claim 20 has been rewritten in independent form and is otherwise essentially unchanged from the originally submitted claim 20.

Claim 22 has been rewritten in independent form and has been amended to overcome the rejection under 35 U.S.C. §101, and is otherwise essentially unchanged from the originally submitted claim 22.

The Examiner rejected claims 1-10, 11-16, 22-23 and 25-33 under 35 U.S.C. §101.

The Examiner rejected claims 1-6, 10-12, 15-18, 20, 22-29 and 33 under 35 U.S.C. §103(a) as allegedly being unpatentable over US Patent 5,202,593 issued to Huang in view of US Patent 6,496,955 issued to Chandra.

The Examiner rejected claims 7-9, 13-14, 19, 21 and 30-32 under 35 U.S.C. §103(a) as allegedly being unpatentable over US Patent 5,202,593 issued to Huang in view of US Patent 6,496,955 issued to Chandra as applied to rejection of claims 1-6, 10-12, 15-18, 20, 22-29 and 33 above, further in view of US Patent 5,396,435 issued to Ginetti.

Applicants respectfully traverse the §101 and §103 rejections with the following arguments.

35 U.S.C. §101

The Examiner rejected claims 1-10, 11-16, 22-23 and 25-33 under 35 U.S.C. §101 because the claimed invention is allegedly directed to non-statutory subject matter.

The Examiner argues: "Claims 1-10 & 11-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, software per se. Claims 1 & 11 are not tangibly embodied so as to be executable by a computer. Claims 2-10 and 12-16 are rejected on basis their dependency upon claims 1 and 11 respectively." In response, Applicants have amended independent claim 12 (from which pending claims 3, 5-6, 13-14, and 16 depend), such that the model is "tangibly embodied in a computer readable memory unit that comprises a Hardware Description Language (HDL) application program therein, the model being adapted to be used for simulating the electronic device by executing the HDL application program on a processor of a computer system". Accordingly, Applicants respectively contend that claims 3, 5-6, 12-14, and 16 are not unpatentable under 35 U.S.C. §101.

The Examiner argues: "Claims 22-23 & 25-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In claim 22 "signal bearing media" is defined in the specification (Pg 9-Line7-9) to include tangible items ("recordable type media") and items which are non-tangible ("transmission type media"). Therefore the claim as whole is not directed towards a tangible medium. It is suggested "signal bearing media" be changed to "recordable media" to overcome this rejection. Claims 23 and 25-33 are rejected on basis their dependency upon claims 22." In response, Applicants have amended independent claim 22 (from which pending claims 26 and 28-33 depend) has been amended such that "signal

bearing media" has been changed to "recordable media" as suggested by the Examiner. Accordingly, Applicants respectively contend that claims 22, 26, and 28-33 are not unpatentable under 35 U.S.C. §101.

35 U.S.C. §103

The Examiner rejected claims 1-6, 10-12, 15-18, 20, 22-29 and 33 under 35 U.S.C. §103(a) as allegedly being unpatentable over US Patent 5,202,593 issued to Huang in view of US Patent 6,496,955 issued to Chandra.

Since claims 1-2, 4, 6, 10-11, 15, 17, 23-25, and 28 have been canceled, the rejection of claims 1-2, 4, 6, 10-11, 15, 17, 23-25, and 28 over Huang in view of Chandra under 35 U.S.C. §103(a) is moot.

Applicants respectfully contend that claims 12, 20, and 22 are not unpatentable over Huang in view of Chandra, because Huang in view of Chandra does not teach or suggest each and every feature of claims 12, 20, and 22. For example, Huang in view of Chandra does not teach or suggest the feature of: the first path including a second NMOS device and a fourth NMOS device, and the second path including a first NMOS device and a third NMOS device.

The Examiner argues: "Huang discloses 3-input-NOR gate (Fig.1 elements 24 & 26) and details of a buffer (Fig. 2). The buffer comprises of two NMOS, only one of them in the path at any given time... Regarding the claims limitation that two NMOS devices are used in each path, Huang teaches that each path comprises a NOR gate and a buffer. These devices inherently include at least one NMOS each as depicted in Fig.1 (Huang) and Fig.2 (Huang)."

In response, Applicants disagree with the Examiner's contention that Huang discloses an NMOS device in the buffer 16 of FIG. 2 of Huang. While Huang discloses that the buffer 16 comprises transistors T1 and T2, Huang does not disclose that the transistors T1 and T2 are NMOS transistors.

Applicants disagree with the Examiner's contention that Huang inherently discloses an NMOS device in the NOR gates 24 and 26 of FIG. 1 of Huang. Case law requires that inherency must **necessarily and inevitably** follow from the teachings in the prior art See, e.g., Glaxo Inc. V. Novopharm Ltd., 52 F.3d 1043, 34 U.S.P.Q.2d 1565 (Fed. Cir. 1995); The Toro Co. V. Deere & Co., 355 F.3d 1313, 1320 (Fed. Cir. 2004). In the instant case, all that Huang discloses is the existence of a NOR gate, which is nothing more than two switches A and B in parallel causing the output of Y = A NOR B to go low if A, B, or A and B is high. The two switches A and B may comprise transistors but may be alternatively be switches not comprising transistors. Moreover, even if the switches A and B comprise transistors, the transistors do not have to be NMOS transistors.

Moreover, inherency cannot be used to reject a claim under 35 U.S.C. § 103(a). *In re Shetty*, 566 F.2d 81, 86, 195 U.S.P.Q. 753, 756-57 (C.C.P.A. 1977) (reversing the Board's rejection of a claim based on alleged inherency under 35 U.S.C. 103 of a method to curb appetite, and stating: "[t]he inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown").

The legally proper way to allege obviousness with respect to the NOR gate in Huang is to cite a prior art reference that comprises an NMOS device and then demonstrate motivation found in the prior art to modify Huang's NOR gate by including an NMOS device in Huang's NOR gate. Since the Examiner has not done this, Applicants respectfully contend that the Examiner has not established a *prima facie* case of obviousness with respect to claims 12, 20, and 22.

Based on the preceding arguments, Applicants respectfully maintain that claims 12, 20, and 22 are not unpatentable over Huang in view of Chandra, and that claims 12, 20, and 22 are in condition for allowance. Since claims 3, 5, and 16 depend from claim 12, Applicants contend that claims 3, 5, and 16 are likewise in condition for allowance. Since claim 18 depends from claim 20, Applicants contend that claim 18 is likewise in condition for allowance. Since claims 26, 28-29, and 33 depend from claim 22, Applicants contend that claims 26, 28-29, and 33 are likewise in condition for allowance.

The Examiner rejected claims 7-9, 13-14, 19, 21 and 30-32 under 35 U.S.C. §103(a) as allegedly being unpatentable over US Patent 5,202,593 issued to Huang in view of US Patent 6,496,955 issued to Chandra as applied to rejection of claims 1-6, 10-12, 15-18, 20, 22-29 and 33 above, further in view of US Patent 5,396,435 issued to Ginetti.

Since claims 7-9 have been canceled, the rejection of claims 7-9 over Huang in view of Chandra and further in view of Ginetti under 35 U.S.C. §103(a) is moot.

Since claims 13-14 depend from claim 12, which Applicants have argued *supra* to not be unpatentable over Huang in view of Chandra under 35 U.S.C. §103(a), Applicants maintain that claims 13-14 are likewise not unpatentable over Huang in view of Chandra and further in view of Ginetti under 35 U.S.C. §103(a). Since claims 19 and 21 depend from claim 20, which Applicants have argued *supra* to not be unpatentable over Huang in view of Chandra under 35 U.S.C. §103(a), Applicants maintain that claims 19 and 21 are likewise not unpatentable over Huang in view of Chandra and further in view of Ginetti under 35 U.S.C. §103(a). Since claims

30-32 depend from claim 22, which Applicants have argued *supra* to not be unpatentable over Huang in view of Chandra under 35 U.S.C. §103(a), Applicants maintain that claims 30-32 are likewise not unpatentable over Huang in view of Chandra and further in view of Ginetti under 35 U.S.C. §103(a).

CONCLUSION

Based on the preceding arguments, Applicants respectfully believe that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicants invites the Examiner to contact Applicants' representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account No. 09-0456.

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